

Cancer Research Network (CRN) Applied Research Program

Overview

The Cancer Research Network (CRN) is a consortium of nine nonprofit research centers based in integrated health care delivery organizations. Collectively, these organizations provide care to nearly 10 million individuals.

CRN research focuses on the characteristics of patients, clinicians, communities, and health systems that lead to the best possible outcomes in cancer prevention and care. The CRN enables large, multi-center, multidisciplinary research that addresses the spectrum of cancer control, including studies of prevention, early detection, treatment, survivorship, surveillance, and end-of-life care. The CRN also develops and makes use of standardized approaches to data collection, data management, and analysis across health systems.

First funded in 1999, the CRN originally focused on coordinated major research projects supported by related cores. Early research centered on improving services in the areas of cancer prevention and screening, which reflected the main expertise of CRN researchers. The fourth funding cycle of the CRN (CRN4), beginning in October 2012, establishes the CRN as a Research Resource, with the goals of expanding the scope and variety of research questions that can be addressed and facilitating access of non-CRN-affiliated investigators to CRN data and expertise. Lawrence H. Kushi, ScD serves as the CRN Principal Investigator. V. Paul Doria-Rose, DVM, PhD is the NCI Program Director.

To achieve its scientific goals, the CRN fosters collaborations among CRN investigators and with investigators and research institutions outside of the CRN member organizations. CRN activities have generated more than 295 journal publications in a range of disciplines.

To search the CRN publications database, please visit

<http://crn.cancer.gov/publications>.

During the fourth funding cycle, CRN research priorities will be coordinated by four Scientific Working Groups.

Scientific Working Groups of the CRN

- Prevention and Screening
- Prognosis and Outcomes
- Health Care Quality and Cost
- Communications and Dissemination

Opportunities to Work with the CRN

A major focus of CRN4 is to facilitate new collaborations with non-CRN-affiliated investigators. Researchers who are interested in collaborating with the CRN are eligible to apply for CRN developmental and pilot studies funds, which support preliminary investigations of promising research questions. Results from funded pilot projects may then be used as preliminary data in applications for additional research funding. Junior investigators at institutions outside the CRN are also eligible to apply for the CRN Scholars Program, a 26-month mentored career development program that trains young investigators in the use of CRN resources to conduct multisite and multidisciplinary studies.

Persons who are interested in collaborating with the CRN can learn more, and make initial contact with the CRN, through a web enquiry form at

<http://crn.cancer.gov/collaboration>.

Research Highlights

1) In 2008, **Rebecca Smith-Bindman, MD** (University of California, San Francisco) received an R21 award from NCI to develop data elements to study imaging examinations and accompanying radiation exposure at a single CRN site. Through additional CRN pilot funding, she was able to add five other CRN sites to the project. Based on this work, she documented a three-fold increase in computed tomography (CT) and four-fold increase in magnetic resonance imaging (MRI) between 1996 and 2010 in these six health plans. Additional funding applications are under development to continue her CRN collaborations in this area.

2) In 2009, **Laurence McCahill, MD** (University of Vermont) submitted a CRN research concept to identify and quantify surgical quality measures for breast cancer surgery and determine the feasibility of assessing variation among surgeons. He already had a database created at his university, but wanted to supplement his work by looking at the variation in an HMO setting. He worked with the CRN to identify three CRN sites to participate, and will be able to disseminate the lessons learned to additional CRN sites. The investigative team received a Challenge Grant, which has resulted in three publications to date. One publication reported a large variation among surgeons in reexcision rates following initial breast conserving surgery, ranging from 0 to 70 percent.

3) In 2008, an administrative supplement entitled "Building a Pharmacovigilance Population-Based Laboratory" was awarded to the CRN to enable the conduct of pharmacoepidemiologic and pharmacogenomic studies within the network. A recent analysis led by **Erin Aiello Bowles, MPH** (Group Health Research Institute) found a greater than seven-fold increase in the risk of cardiomyopathy/heart failure in women with breast cancer treated with anthracycline plus trastuzumab. The cumulative incidence of heart failure was more than ten-fold

higher in older patients than that observed in randomized controlled trials, which included primarily younger women without significant comorbidities.

CRN Sites

- **Fallon Community Health Plan, Meyers Primary Care Institute**
(PI: Kathleen Mazor)
- **Group Health Cooperative, Group Health Research Institute**
(PI: Jessica Chubak)
- **Health Alliance Plan, Henry Ford Hospital and Health System**
(PI: Christine Cole Johnson)
- **Kaiser Permanente Colorado, Institute for Health Research**
(PI: Debra Ritzwoller)
- **Kaiser Permanente Hawaii, Center for Health Research/Hawaii**
(PI: Andrew Williams)
- **Kaiser Permanente Southern California, Department of Research and Evaluation**
(PI: Virginia Quinn)
- **Kaiser Permanente Northern California, Division of Research**
(PI: Lawrence Kushi)
- **Kaiser Permanente Northwest, Center for Health Research/Northwest**
(PI: Mark Hornbrook)
- **Security Health Plan, Marshfield Clinical Research Foundation**
(PI: Robert Greenlee)

Contact Information

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